PART 70 OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Ferro Corporation
1301 North Flora Street
Plymouth, IN 46563

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T099-7538-00025	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary mixing and blending manufacturing operation for liquid coatings and dispersions.

Responsible Official:	Dr. Ronald M. Harris
Source Address:	1301 North Flora Street, Plymouth, IN 46563
Mailing Address:	1301 North Flora Street, Plymouth, IN 46563
SIC Code:	3087
County Location:	Marshall
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) Eighteen mixers, consisting of:

(1) one (1) mixer, identified as M1, with a maximum unit capacity of 3,800 pounds of raw material for gelcoat and cordobond production per batch, exhausting within the building,

(2) one (1) mixer, identified as M2, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(3) one (1) mixer, identified as M3, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(4) one (1) mixer, identified as M4, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(5) one (1) mixer, identified as M5, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat, liquid paste, and cordobond production per batch, exhausting within the building,

(6) one (1) mixer, identified as M6, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(7) one (1) mixer, identified as M7, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(8) one (1) mixer, identified as M8, with a maximum unit capacity of 6,000 pounds of raw material for gelcoat production per batch, exhausting within the building,

(9) one (1) mixer, identified as M9, with a maximum unit capacity of 7,800 pounds of raw material for gelcoat production per batch, exhausting within the building,
(10) one (1) mixer, identified as M10, with a maximum unit capacity of 11,000 pounds of raw material for gelcoat production per batch, exhausting within the building,
(11) one (1) mixer, identified as M11, with a maximum unit capacity of 5,000 pounds of raw material for gelcoat and liquid paste production per batch, utilizing baghouse G5 for particulate control, exhausting within the building,
(12) one (1) mixer, identified as M12, with a maximum unit capacity of 4,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,
(13) one (1) mixer, identified as M13, with a maximum unit capacity of 1,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,
(14) one (1) mixer, identified as M14, with a maximum unit capacity of 500 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,
(15) one (1) mixer, identified as M15, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building,
(16) two (2) mixers, identified as M16 and M17, each with a maximum unit capacity of 5,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building,
(17) one (1) mixer, identified as M18, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building, and
(18) One mixer, designated as M-30, with two (2) mixing tanks, with a maximum combined capacity of 44,000 pounds per batch, exhausting within the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour,
(b) A laboratory as defined in 326 IAC 2-7-1(20)(C), consisting of:
  (1) one (1) Q/C gelcoat spraybooth, exhausting to stacks D7 and D8, utilizing dry filters as particulate control,
  (2) one (1) electric heated oil roll mill identified as RM1,
  (3) two (2) Q/C lab drill presses, and
  (4) six (6) extruders, identified as IM1-IM6.
(c) Activities or categories with emissions equal to or less than significant thresholds:
  (1) four (4) Roll Mill/Lab Mills for gelcoat and liquid paste,
    (i) one (1) 3-Roll Mill/Lab Mill, identified as RM2 with a maximum unit capacity of 0.75 hp, exhausting within the building,
    (ii) one (1) 3-Roll Mill, identified as RM3, exhausting within the building,
    (iii) one (1) 3-Roll Mill, identified as RM4, exhausting within the building, and
    (iv) one (1) 3-Roll Mill, identified as RM5, exhausting within the building.
  (2) Packaging area for Cordobond, consisting of bottling, can filling and labeling
  (3) Batching area,
  (4) Tub washing (Acetone) and Storage Area,
  (5) three (3) small mixers, identified as M19, M20, and M21,
  (6) eight (8) mixers, utilizing baghouse G5 for particulate control, identified as

(i) DM1, with a maximum unit capacity of 500 pounds per hour,
(ii) DM2, with a maximum unit capacity of 250 pounds per hour,
(iii) DM3, with a maximum unit capacity of 250 pounds per hour,
(iv) DM4, with a maximum unit capacity of 100 pounds per hour, and
(v) Four (4) portable mixers, blenders for dry color production.

(7) four (4) 6,000 gallon tanks storing bulk organic liquid, identified as ST1, ST2, ST3, and ST4,

(8) two (2) 13,000 gallon tanks for storing bulk organic liquid, identified as ST5 and ST6,

(9) two (2) 4,000 gallon tanks for storing bulk organic liquid, identified as ST7 and ST8,

(10) two (2) 6,000 gallon tanks for storing bulk organic liquid, identified as ST9 and ST10.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

(a) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7.

(b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled “Permit Shield.”

B.2 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-7-7(a)]

(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.

(b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source’s potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

(c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was based on continuous or intermittent data;

(4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);

(5) Any insignificant activity that has been added without a permit revision; and

(6) Such other facts, as specified in Sections D of this permit, as IDEM, OAM, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Permit Shield [326 IAC 2-7-15]

(a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.

(b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:

(1) The applicable requirements are included and specifically identified in this permit; or

(2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.

(c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.

(e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) An emergency as defined in 326 IAC 2-7-1(12); or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)]

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAM, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAM, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.19 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.20 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.21 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]

The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

(a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

B.22 Operational Flexibility [326 IAC 2-7-20]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-7-6(6)]

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.25 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.26 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

(a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM, the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Schedule [326 IAC 2-7-6(3)]

The Permittee:

(a) Has certified that all facilities at this source are in compliance with all applicable requirements; and

(b) Has submitted a statement that the Permittee will continue to comply with such requirements; and

(c) Will comply with such applicable requirements that become effective during the term of this permit.

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.12 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.13 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 2, 1996..

(b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

(a) Submit:

(1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or

(2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

(3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

(b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

C.18 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) Eighteen mixers, consisting of:

(1) one (1) mixer, identified as M1, with a maximum unit capacity of 3,800 pounds of raw material for gelcoat and cordobond production per batch, exhausting within the building,

(2) one (1) mixer, identified as M2, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(3) one (1) mixer, identified as M3, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(4) one (1) mixer, identified as M4, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(5) one (1) mixer, identified as M5, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat, liquid paste, and cordobond production per batch, exhausting within the building,

(6) one (1) mixer, identified as M6, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(7) one (1) mixer, identified as M7, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,

(8) one (1) mixer, identified as M8, with a maximum unit capacity of 6,000 pounds of raw material for gelcoat production per batch, exhausting within the building,

(9) one (1) mixer, identified as M9, with a maximum unit capacity of 7,800 pounds of raw material for gelcoat production per batch, exhausting within the building,

(10) one (1) mixer, identified as M10, with a maximum unit capacity of 11,000 pounds of raw material for gelcoat production per batch, exhausting within the building,

(11) one (1) mixer, identified as M11, with a maximum unit capacity of 5,000 pounds of raw material for gelcoat and liquid paste production per batch, utilizing baghouse G5 for particulate control, exhausting within the building,

(12) one (1) mixer, identified as M12, with a maximum unit capacity of 4,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(13) one (1) mixer, identified as M13, with a maximum unit capacity of 1,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(14) one (1) mixer, identified as M14, with a maximum unit capacity of 500 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(15) one (1) mixer, identified as M15, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building,

(16) two (2) mixers, identified as M16 and M17, each with a maximum unit capacity of 5,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building,

(17) one (1) mixer, identified as M18, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building, and

(18) One mixer, designated as M-30, with two (2) mixing tanks, with a maximum combined capacity of 44,000 pounds per batch, exhausting within the building.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The total amount of VOC input to Mixers M1 through M18 and M30 shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than 248.9 tons per twelve (12) consecutive month period, rolled on a monthly basis. This VOC emission limit is required to limit source wide PTE VOC to less than 250 tons per 12 consecutive month period, based upon the following:

(1) an emission factor of 0.02 pounds VOC per pound of Cordobond produced;
(2) an emission factor of 0.015 pounds VOC per pound of polyester gelcoat produced;
(3) an emission factor of 0.001 pounds VOC per pound of liquid paste produced;
(4) any other factor determined in stack testing.

Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 Volatile Organic Compounds [326 IAC 8-1-6]

Pursuant to CP-099-4443-00025, issued January 29, 1993, and 326 IAC 8-1-6 (General Reduction Requirements), the Best Available Control Technology (BACT) for the manufacture of polyester gelcoats in Mixers M10 and M11, shall be as follows:

(a) Mixers M10 and M11 shall be configured and operated as follows:
(1) The exhaust vent shall be positioned in near proximity to the lip of each mixer, but not located on or over the mixer lid, such that VOC vaporization during product mixing is minimized; and
(2) The mixer lids shall be in place when mixing, except during raw material transfer to each mixer, sampling, and product removal from each mixer.

(b) Compliance with the requirements of this condition satisfy the process modification research requirement of Operation Condition 4 (BACT requirement) of CP099-4443-00025, issued October 30, 1995. Therefore, the process modification research and annual progress reporting requirements are satisfied and no longer apply. The requirement from CP099-4443-00025, issued October 30, 1995, conditions #4 and #5, that pursuant to 326 IAC 8-1-6, manufacturing of polyester gelcoats shall pursue process modification research and annual progress reporting requirements are not applicable because the requirements that:
(1) The exhaust vent shall be positioned in near proximity to the lip of each mixer, but not located on or over the mixer lid, such that VOC vaporization during product mixing is minimized; and
(2) The mixer lids shall be in place when mixing, except during raw material transfer to each mixer, sampling, and product removal from each mixer
satisfy the requirements of CP099-4443-00025, issued October 30, 1995, conditions #4 and #5.

D.1.3 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rates are as follows:

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Mixer M1	1.90	6.30
Mixer M2	1.60	5.62
Mixer M3	0.25	1.62
Mixer M4	0.25	1.62
Mixer M5	1.00	4.10
Mixer M6	1.00	4.10
Mixer M7	1.60	5.62
Mixer M8	3.00	8.56
Mixer M9	3.90	10.20
Mixer M10	5.50	12.85
Mixer M11	2.50	7.58
Mixer M12	2.00	6.52
Mixer M13	0.50	2.58
Mixer M14	0.25	1.62
Mixer M15	1.50	5.38
Mixer M16	2.50	7.58
Mixer M17	2.50	7.58
Mixer M18	1.50	5.38
Mixer M30	2.00	6.52

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the VOC content and emission limitations contained in Conditions D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using emission factors recorded during the most recent VOC stack test conducted. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.6 VOC Emissions

Compliance with Condition D.1.1 shall be demonstrated at the end of each month based on the total volatile organic compound emissions for the most recent twelve (12) month period.

D.1.7 Particulate Matter (PM)

The baghouses for PM control shall be in operation at all times when the mixers (M11, M12, M16 and M17) are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1.

(1) The amount and emission factor of each product manufactured and solvent used. Records shall include purchase orders and invoices necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to product and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The weight of VOCs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - The following specifically regulated insignificant activities:
(a) Activities or categories with emissions equal to or less than significant thresholds :
(1) two (2) 13,000 gallon tanks for storing bulk organic liquid, identified as ST5 and ST6.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compounds [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

Pursuant to 40 CFR Part 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), the two (2) 13,000 gallon tanks, identified as ST5 and ST6, each with a vapor pressure of less than 15.0 kPa, are subject to 40 CFR Part 60.116b, paragraphs (a) through (c) which requires record keeping.

Compliance Determination Requirement

D.2.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.2.1, shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.3 Record Keeping Requirement

The Permittee shall maintain permanent records for the two (2) 13,000 gallon tanks, identified as ST5 and ST6 at the facility showing:

(a) the dimension of each storage vessel;

(b) an analysis showing the capacity of each storage vessel; and

(c) the true vapor pressure of each VOC stored, indicating that the maximum true vapor pressure of VOC is less than 15.0 kPa for each of the two (2) 13,000 gallon tanks, identified as ST5 and ST6.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Ferro Corporation
Source Address: 1301 North Flora Street, Plymouth, IN 46563
Mailing Address: 1301 North Flora Street, Plymouth, IN 46563
Part 70 Permit No.: T099-7538-00025

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT

COMPLIANCE DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY/DEVIATION OCCURRENCE REPORT

Source Name: Ferro Corporation
Source Address: 1301 North Flora Street, Plymouth, IN 46563
Mailing Address: 1301 North Flora Street, Plymouth, IN 46563
Part 70 Permit No.: T099-7538-00025

This form consists of 2 pages **Page 1 of 2**

Check either No. 1 or No.2

9 1. This is an emergency as defined in 326 IAC 2-7-1(12)
- C The Permittee must notify the Office of Air Management (OAM), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- C The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

9 2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c)
- C The Permittee must submit notice in writing within ten (**10**) calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency/Deviation:

Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_x, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Ferro Corporation
Source Address: 1301 North Flora Street, Plymouth, IN 46563
Mailing Address: 1301 North Flora Street, Plymouth, IN 46563
Part 70 Permit No.: T099-7538-00025
Facility: Mixers M1-18
Parameter: Volatile Organic Compounds (VOC)
Limit: The total amount of VOC input to Mixers M1 through M18 and M30 shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than 248.9 tons per twelve (12) consecutive month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT

Source Name: Ferro Corporation
Source Address: 1301 North Flora Street, Plymouth, IN 46563
Mailing Address: 1301 North Flora Street, Plymouth, IN 46563
Part 70 Permit No.: T099-7538-00025

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	**Number of Deviations**	**Date of each Deviation**

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Part 70 Operating Permit

Source Name: Ferro Corporation
Source Location: 1301 North Flora Street, Plymouth, IN 46563
County: Marshall
SIC Code: 3087
Operation Permit No.: T099-7538-00025
Permit Reviewer: Phillip Ritz / EVP

On May 7, 1999, the Office of Air Management (OAM) had a notice published in the Plymouth Pilot News, Plymouth, Indiana, stating that Ferro Corporation had applied for a Part 70 Operating Permit to operate a mixing and blending manufacturing operation for liquid coatings and dispersions. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On June 7, 1999 and August 27, 1999, Ronald M. Harris submitted comments on behalf of Ferro Corporation on the proposed Part 70 Operating Permit. The summary of the comments and corresponding responses is as follows:

Comment 1

Section A.1, General Information: The Responsible Official should be changed to Dr. Ronald M. Harris.

Response 1

Section A.1 "General Information" has been changed to be as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary mixing and blending manufacturing operation for liquid coatings and dispersions.

Responsible Official: ~~Hugh Gainey~~ **Dr. Ronald M. Harris**

Comment 2

Section A.2, Emission Units and Pollution Control Equipment Summary: This section should be amended to add a paragraph (18) to read as follows:

"(18) One mixer, designated as M-30, with two (2) mixing tanks, with a maximum combined capacity of 44,000 lbs. per batch, exhausting within the building."

This emission unit was proposed under Construction Permit No. CP-099-9439-00025. The only applicable rule was 326 IAC 6-3. 326 IAC 8-1-6 was not applicable, since potential emissions of VOCs were less than 25 tons/year. This emission unit should also be added to the equipment descriptions in section D.1 of the permit.

Response 2

(a) The equipment listed in Section A.2, "Emission Units and Pollution Control Equipment Summary" has been changed to be as follows:

(16) two (2) mixers, identified as M16 and M17, each with a maximum unit capacity of 5,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building, ~~and~~

(17) one (1) mixer, identified as M18, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building**, and**

(18) One mixer, designated as M-30, with two (2) mixing tanks, with a maximum combined capacity of 44,000 pounds per batch, exhausting within the building.

(b) The equipment listed in Section D.1, "FACILITY OPERATION CONDITIONS" has been changed to be as follows:

SECTION D.1 FACILITY OPERATION CONDITIONS

(16) two (2) mixers, identified as M16 and M17, each with a maximum unit capacity of 5,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building, ~~and~~

(17) one (1) mixer, identified as M18, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building~~.~~**, and**

(18) One mixer, designated as M-30, with two (2) mixing tanks, with a maximum combined capacity of 44,000 pounds per batch, exhausting within the building.

(c) The equipment listed in Condition D.1.1, "PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]" has been changed to be as follows:

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The total amount of VOC input to Mixers M1 ~~through M9 and M12~~ through M18 **and M30** shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than ~~221.9~~ **248.9** tons per twelve (12) consecutive month period, rolled on a monthly basis. This VOC emission limit is required to limit source wide PTE VOC to less than 250 tons per 12 consecutive month period, based upon the following:

(d) The equipment listed in Condition D.1.3, "Particulate Matter (PM) [326 IAC 6-3]" has been changed to include Mixer M-30 as follows:

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Mixer M30	**2.00**	**6.52**

(e) Part 70 Quarterly Report for Volatile Organic Compounds (VOC), has been changed to be as follows:

Limit: The total amount of VOC input to Mixers M1 ~~through M9 and M12~~ through M18 **and M30** shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than ~~221.9~~ **248.9** tons per twelve (12) consecutive month period, rolled on a monthly basis.

(f) The Technical Support Document (TSD) should also reflect these changes. However, the TSD is not physically changed after public notice. The changes are noted here in the Addendum to the Technical Support Document serve to update the original TSD.

Comment 3

Section A.3, Specifically Regulated Insignificant Activities: We would recommend the following changes to this section to accurately reflect the equipment at our facility;

Sections (b)(5) and (b) (6) should be removed, since this equipment is no longer at the facility. We would request that the capacity rating in section (c)(1)(I) be removed to be consistent with the other descriptions.

Sections (c)(9) and (10) should be combined to read
"Eight (8) mixers, utilizing baghouse G5 for particulate control, identified as

(i) DM1, with a maximum unit capacity of 500 pounds per hour,
(ii) DM2, with a maximum unit capacity of 250 pounds per hour
(iii) DM3, with a maximum unit capacity of 250 pounds per hour,
(iv) DM4, with a maximum unit capacity of 100 pounds per hour, and
(v) Four (4) portable mixers, blenders for dry color production".

The remaining sections should then be re-numbered.

The reference to styrene monomer in the section (c)(14) should be removed.

Response 3

Section A.3. "Specifically Regulated Insignificant Activities" has been changed to be as follows:

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour,

(b) A laboratory as defined in 326 IAC 2-7-1(20)(C), consisting of:
- (1) one (1) Q/C gelcoat spraybooth, exhausting to stacks D7 and D8, utilizing dry filters as particulate control,
- (2) one (1) electric heated oil roll mill identified as RM1,
- (3) two (2) Q/C lab drill presses, **and**
- (4) six (6) extruders, identified as IM1-IM6**.**
- ~~(5) one (1) BMC/SMC sample mixer, and~~
- ~~(6) one (1) 100 ton QC press.~~

(c) Activities or categories with emissions equal to or less than significant thresholds:
- (1) four (4) Roll Mill/Lab Mills for gelcoat and liquid paste,
  - (i) one (1) 3-Roll Mill/Lab Mill, identified as RM2 with a maximum unit capacity of 0.75 hp, exhausting within the building,
  - (ii) one (1) 3-Roll Mill, identified as RM3, exhausting within the building,
  - (iii) one (1) 3-Roll Mill, identified as RM4, exhausting within the building, and
  - (iv) one (1) 3-Roll Mill, identified as RM5, exhausting within the building.
- (2) Packaging area for Cordobond, consisting of bottling, can filling and labeling,
- ~~(4)~~**(3)** Batching area,
- ~~(5)~~**(4)** Tub washing (Acetone) and Storage Area,
- ~~(8)~~**(5)** three (3) small mixers, identified as M19, M20, and M21,
- ~~(9)~~**(6)** ~~four (4) mixers, identified as:~~
  - ~~(i) DM1, with a maximum unit capacity of 500 lb per hour,~~
  - ~~(ii) DM2, with a maximum unit capacity of 250 lb per hour,~~
  - ~~(iii) DM3, with a maximum unit capacity of 250 lb per hour, and~~
  - ~~(iv) DM4, with a maximum unit capacity of 100 lb per hour.~~

  eight (8) mixers, utilizing baghouse G5 for particulate control, identified as
  - **(i) DM1, with a maximum unit capacity of 500 pounds per hour,**
  - **(ii) DM2, with a maximum unit capacity of 250 pounds per hour**
  - **(iii) DM3, with a maximum unit capacity of 250 pounds per hour,**
  - **(iv) DM4, with a maximum unit capacity of 100 pounds per hour, and**
  - **(v) Four (4) portable mixers, blenders for dry color production.**
- ~~(10) four (4) portable mixers/blenders for dry color production, utilizing baghouse G5 for particulate control,~~
- ~~(11)~~**(7)** four (4) 6,000 gallon tanks storing bulk organic liquid, identified as ST1, ST2, ST3, and ST4,
- ~~(12)~~**(8)** two (2) 13,000 gallon tanks for storing bulk organic liquid, identified as ST5 and ST6,
- ~~(13)~~**(9)** two (2) 4,000 gallon tanks for storing bulk organic liquid, identified as ST7 and ST8,
- ~~(14)~~**(10)** two (2) 6,000 gallon tanks for storing bulk organic liquid ~~(styrene monomer)~~, identified as ST9 and ST10.

Comment 4

Condition B.14, Permit Shield: The wording of paragraph (b) is intended to include former Construction Permit conditions that may not be specifically noted in this permit. We request that a written confirmation that all of the conditions in the previously issued construction and operating permits are superceded by this permit.

An example is Operation Conditions 4 and 5 in Construction Permit CP 099-4443, as issued on October 30, 1995. We think Condition D.1.2 of the Permit does satisfy the requirements of 326 IAC 8-1-6 for state BACT and want written confirmation.

Response 4

This condition is almost exactly the wording required by 326 IAC 2-7-15. OAM agrees that some of the wording should be changed as requested. 40 CFR 70.6(f) states that the permitting authority may expressly include in a Part 70 permit a provision stating that compliance with the conditions of the permit shall be deemed in compliance with any applicable requirements. OAM believes non-applicable requirement determinations should be dealt with in Section D. OAM has also added language dealing with applicable requirements from prior permits. On July 28, 1998, the OAM was notified that the U.S. EPA would object to any Title V Operating Permit that superceded all previous construction permits. The U.S. EPA indicated that they believed that the authority for certain applicable requirements might expire if the construction permits that established them expired. The OAM believes that the regulatory process is best served if all affected parties are able to rely on the Title V Operating Permit to identify all applicable requirements and the means for demonstrating compliance with each requirement.

The OAM intends to continue discussions with the U.S. EPA regarding the issues related to past construction permits. However the OAM also believes that the Permit Shield condition B.14 (b) (1) & (2) establishes that the Title V permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of the permit shall be deemed in compliance with any applicable requirements as of the date of the permit issuance for all the previous permits identified by the source and the OAM during the course of this review.

A list of requirements specifically determined not to apply to the source can be listed in this section or in Section D subsections or in an attachment to the permit. The Permittee must state which specific requirements it believes do not apply and exactly why the requirements do not apply. The decision on whether the applicability of each requirement will be made on a case by case basis.

To document the non-applicable conditions from CP099-4443-00025, issued October 30, 1995, the operating permit will now contain a condition that explains what construction permit conditions do not carry over, and includes the construction permit number, issuance date, condition number, and why the requirement is not applicable. The TSD already explains why these construction permit conditions are not carried over to the operating permit. In addition the following language now appears in Section D.1 under Emission Limitations and Standards [326 IAC 2-7-5(1)] to provide written confirmation that Conditions 4 and 5 in Construction permit CP 099-4443 are no longer applicable:

~~(c)~~**(b)** Compliance with the requirements of this condition satisfy the process modification research requirement of Operation Condition 4 (BACT requirement) of CP099-4443-00025, issued October 30, 1995. Therefore, the process modification research and annual progress reporting requirements are satisfied and no longer apply. **The requirement from CP099-4443-00025, issued October 30, 1995, conditions #4 and #5, that pursuant to 326 IAC 8-1-6, manufacturing of polyester gelcoats shall pursue process modification research and annual progress reporting requirements are not applicable because the requirements that:**

(1) The exhaust vent shall be positioned in near proximity to the lip of each mixer, but not located on or over the mixer lid, such that VOC vaporization during product mixing is minimized; and

(2) The mixer lids shall be in place when mixing, except during raw material transfer to each mixer, sampling, and product removal from each mixer satisfy the requirements of CP099-4443-00025, issued October 30, 1995, conditions #4 and #5.

Comment 5

Section D.1 and D.2, Facility Description: We would request that the first sentence in Section A of the permit be amended to read as follows to reference Conditions D.1 and D.2:

"The information describing the source contained in Conditions A.1 through A.3 and D.1 and D.2 is descriptive information and does not constitute enforceable conditions."

Response 5

The facility description boxes in Section D.1 and D.2 have been revised to clarify that descriptive information is not federally enforceable.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Comment 6

Condition D.1.2, Volatile Organic Compounds: Paragraph (b) is not appropriate and needs to be deleted in its entirety. The limits set are not based on any BACT proposal or other proposal. If IDEM still believes the paragraph is necessary, we ask for a meeting prior to final permit issuance to address inaccuracies in the proposed formula and other related matters. Additionally, the original Construction Permit, which required our evaluation of reduction methods for our mixers did not establish a production limit, nor did it require that one be established at any future date. We believe that paragraph (a) of Condition D.1.2 is sufficient to satisfy the BACT requirements.

Response 6

CP099-4443-00025, issued October 30, 1995, states that Mixers M10 and M11 were determined to be subject to 326 IAC 8-1-6 due to the potential to emit VOC of 42.9 tons per year. A BACT analysis was performed and Ferro requested that Condition 4 be included in CP099-4443-00025 to research a process modification capable of VOC reduction, rather than utilize add-on control. Research performed and provided in the Pollution Prevention (P^2) Opportunity Assessment Brief supplied by the Indiana Clean Manufacturing Technology and Safe Materials Institute for Ferro Corporation states that a 43.3 percent reduction in styrene emissions would result from the use of the exhaust cover change as a process modification.

Condition 4 of CP099-4443-00025 and Condition D.1.2(a) of the permit require that the process modification for M10 and M11 be in place and utilized for compliance with the requirements of 326 IAC 8-1-6. Compliance with Condition D.1.2(a) is sufficient to show that the source is in compliance with the requirements of 326 IAC 8-1-6. Therefore, Condition D.1.2 (b), which limits production for Mixers M10 and M11, has been removed from the permit.

The changes to the permit are as follows:

(a) Condition D.1.2(b) has been deleted as follows:

~~(b) The total amount of VOC product manufactured in Mixers M10 and M11 shall be limited to 308.3 tons per twelve (12) consecutive months. This production limitation is necessary to limit the potential to emit (PTE) VOC from the manufacture of polyester gel coats to 25.9 tons per twelve (12) consecutive months, based upon an emission factor of 0.084 pounds VOC emitted per pound of product manufactured or any other factor determined in stack testing.~~

(b) Condition D.1.5, Volatile Organic Compounds (VOC), has been revised as follows:
Compliance with the VOC content and emission limitations contained in Conditions D.1.1 ~~and D.1.2~~ shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using emission factors recorded during the most recent VOC stack test conducted. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(c) Condition D.1.6, VOC Emissions, has been revised as follows:

Compliance with Condition D.1.1 ~~and D.1.2~~ shall be demonstrated at the end of each month based on the total volatile organic compound emissions for the most recent twelve (12) month period.

(d) Condition D.1.8, Record Keeping Requirements, has been revised as follows:

To document compliance with Conditions D.1.1 ~~and D.1.2 (b)~~, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 ~~and D.1.2 (b)~~.

(e) Condition D.1.9, Reporting Requirements, has been revised as follows:

A quarterly summary of the information to document compliance with Conditions D.1.1 ~~and D.1.2~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(f) The Part 70 Quarterly Report, on page 37 of 38 of the public noticed permit, has been deleted from the permit.

Upon further review, the OAM has decided to make the following revisions to the TSD (**bolded** language has been added, the language with a ~~line~~ through it has been deleted). The OAM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Page 11 of 12 of the TSD, 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), has been revised as follows to remove the production limitation:

Facilities constructed after January 1, 1980, with potential VOC emissions greater than 25 tons per year are subject to 326 IAC 8-1-6. Pursuant to CP099-4443-00025, issued October 30, 1995, the Best Available Control Technology (BACT) requirement of 326 IAC 8-1-6 was determined to apply to the manufacture of gelcoats in Mixers M10 and M11. BACT under Operation Condition 4 was determined to be a process modification without any add-on control, whereby the source was to conduct research to develop a process to reduce allowable annual VOC emission by 10-50%. The source was required to submit an annual report on the status of its research.

Included in the Part 70 Permit application was a research paper describing two process modification procedures evaluated pursuant to Operation Condition 4 of CP099-4443-00025. Briefly, the evaluated modifications are described as follows:

(a) use of the coolant jacket to cool the resin, and
(b) changes to the exhaust and cover configuration.

The cooling jacket is technologically infeasible since the mixture nearest the vat wall would thicken, stiffen, and resist mixing properly, and varying batch sizes would result in a high probability that humidity condensate would form on a portion of the vat wall above the resin surface. Moving of the vent is expected to reduce allowable VOC (computed in CP099-4443-00025 as 42.9 tons per year) by 40 percent.

Therefore, BACT has been determined as follows:

(a) Mixers M10 and M11 shall be configured and operated as follows:
  (3) The exhaust vent shall be positioned in near proximity to the lip of each mixer, but not located on or over the mixer lid, such that VOC vaporization during product mixing is minimized; and
  (4) The mixer lids shall be in place when mixing, except during raw material transfer to each mixer, sampling, and final product removal from each mixer.

~~(b) CP099-4443-00025 computed the VOC emissions from Mixers M10 and M11 as 42.9 tons per year. The process modification is expected to reduce allowable VOC emissions by 40 percent, or 25.9 tons per year. The total amount of VOC product manufactured in Mixers M10 and M11 shall be limited to 308.3 tons per year, per twelve (12) consecutive months, rolled on a monthly basis. This production limitation is necessary to limit the potential to emit (PTE) VOC from the manufacture of polyester gel coats to 25.9 tons per year, per twelve (12) consecutive months, based upon an emission factor of 0.084 pounds VOC emitted per pound of product manufactured or any other factor determined in stack testing.~~

~~(c)~~**(b)** Compliance with the requirements of this condition satisfy the process modification research requirement of Operation Condition 4 (BACT requirement) of CP099-4443-00025, issued October 30, 1995. Therefore, the process modification research and annual progress reporting requirements are satisfied and no longer apply.

Comment 7

Condition D.1.4, Testing Requirements: This requirement should be deleted from the Permit. The requirement to perform VOC testing 30 to 36 months after the issuance of the permit and every five years thereafter is unnecessary and is overly burdensome. Ferro has already conducted testing to confirm the AP-42 VOC emission factors for the production of the various coatings and dispersions produced at the plant. Additionally, the emissions from the Gelcoat production process are consistent with the AP-42 VOC emission factors for paint and varnish production. We believe that this AP-42 factor is an appropriate factor for the production of Gelcoat, since the solvent levels and manufacturing methods are similar to the production of paints and varnishes. The factor, which was determined from resin and which is used in Section D.1.1 of the permit for the production of Gelcoat, is 0.014 pounds of VOC per pound of product. The AP-42 factor is 0.015 pounds of VOC per pound of product. Since these two factors are so close, we would propose to use the AP-42 factor of 0.015 pounds of VOC per pound of product. As such we do not believe that any further testing is warranted for the Gelcoat production process.

Response 7

All calculations for permitting purposes are made using the emission factors from AP-42, Compilation of Air Pollutant Emission Factors, which has been produced by the U.S. EPA Office of Air Quality Planning and Standards. The EPA has compiled and rated emission factors in this document based upon available information, including stack tests and engineering estimates.

The AP-42, Chapter 6.4, description of paint manufacturing involves the dispersion of a colored oil or pigment in a vehicle, usually an oil or resin, followed by the addition of an organic solvent for viscosity adjustment. Only the physical processes of weighing, mixing, grinding, tinting, thinning or packaging take place. No chemical reactions are involved, and the process takes place in large mixing tanks at approximately room temperature. This description is identical to the gelcoat operations conducted at the source. Therefore, the emission factor for the gelcoat has been replaced with the AP-42 VOC emission factor of 30 pounds per ton of paint (or, in this case, gelcoat) manufactured.

The following changes have been made to the permit to remove the source supplied 0.014 pounds of VOC per pound of polyester gelcoat produced alternate emission factor , to replace it with the AP-42 Chapter 6.4 emission factor of 0.015 pounds VOC per pound of polyester gelcoat produced, and to also remove the testing requirements for verification of the source supplied alternate emission factor:

(a) Condition D.1.1 of the permit, the PSD Minor Limit, has been revised as follows:

(a) The total amount of VOC input to Mixers M1 ~~through M9, M12~~ through M18 and M30 shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than ~~221.9~~ **248.9** tons per twelve (12) consecutive month period, rolled on a monthly basis. This VOC emission limit is required to limit source wide PTE VOC to less than 250 tons per 12 consecutive month period, based upon the following:

(1) an emission factor of 0.02 pounds VOC per pound of Cordobond produced;

(2) an emission factor of ~~0.014~~ **0.015** pounds VOC per pound of polyester gelcoat produced~~, except as produced in Mixers M10 and M11 as stated in Operation Condition D.1.2~~;

(3) an emission factor of 0.001 pounds VOC per pound of liquid paste produced;

(4) any other factor determined in stack testing.

Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

(a) Condition D.1.4, Testing Requirements, has been revised as follows:

D.1.4 [326 IAC 2-7-6(1),(6)] **[326 IAC 2-1.1-11]**

~~During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform VOC testing utilizing Methods 24 (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner, to verify the emission factors specified in Conditions D.1.1 and D.1.2. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

Upon further review, the OAM has decided to make the following revisions to the TSD (**bolded** language has been added, the language with a ~~line~~ through it has been deleted). The OAM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

(a) The Limited Potential to Emit table, on page 7 of 12 of the TSD, has been revised as follows to include the use of the AP-42 emission factor and Mixer M30:

	Limited Potential to Emit (tons/year)							
Process/facility	*PM	*PM-10	SO_2	*VOC	CO	NO_X	Any Single HAP	Total HAPs
Mixer M1	0.22	0.22	0.00	~~26.89~~ **24.77**	0.00	0.00	~~12.75~~ **12.58** (styrene)	~~22.73~~ **22.54**
Mixer M2	23.74	23.74	0.00	~~12.05~~ **11.89**	0.00	0.00	~~10.74~~ **10.60** (styrene)	~~19.14~~ **18.98**
Mixer M3	3.71	3.71	0.00	~~4.71~~ **4.64**	0.00	0.00	~~4.20~~ **4.14** (styrene)	~~7.48~~ **7.42**
Mixer M4	3.71	3.71	0.00	~~4.71~~ **4.64**	0.00	0.00	~~4.20~~ **4.14** (styrene)	~~7.48~~ **7.42**
Mixer M5	2.97	2.97	0.00	~~10.76~~ **9.96**	0.00	0.00	~~10.33~~ **10.19** (styrene)	~~18.41~~ **18.25**
Mixer M6	14.84	14.84	0.00	~~11.58~~ **11.43**	0.00	0.00	~~10.33~~ **10.19** (styrene)	~~14.8~~ **14.65**
Mixer M7	23.74	23.74	0.00	~~12.05~~ **11.89**	0.00	0.00	~~10.74~~ **10.60** (styrene)	~~15.39~~ **15.23**
Mixer M8	3.11	3.11	0.00	~~16.73~~ **16.51**	0.00	0.00	~~14.92~~ **14.72** (styrene)	~~21.38~~ **21.16**
Mixer M9	4.04	4.04	0.00	~~21.75~~ **21.46**	0.00	0.00	~~19.39~~ **19.13** (styrene)	~~34.57~~ **34.28**
Mixer M10	5.70	5.70	0.00	~~30.68~~ **30.27**	0.00	0.00	~~27.35~~ **26.98** (styrene)	~~48.75~~ **48.34**
Mixer M11	1.30	1.30	0.00	~~94.12~~ **92.88**	0.00	0.00	~~83.91~~ **82.79** (styrene)	~~96.07~~ **94.81**
Mixer M12	1.04	1.04	0.00	~~0.54~~ **0.50**	0.00	0.00	~~0.62~~(styrene)	1.55
Mixer M13	0.26	0.26	0.00	~~0.13~~ **0.12**	0.00	0.00	0.15 (chromium)	0.39
Mixer M14	0.13	0.13	0.00	~~0.07~~ **0.06**	0.00	0.00	0.08 (chromium)	0.19
Mixer M15	0.78	0.78	0.00	~~0.40~~ **0.37**	0.00	0.00	0.46 (chromium)	1.16
Mixer M16	1.30	1.30	0.00	~~0.67~~ **0.62**	0.00	0.00	0.77 (chromium)	1.94

Mixer M17	1.30	1.30	0.00	~~0.67~~ **0.62**	0.00	0.00	0.77 (chromium)	1.94
Mixer M18	0.78	0.78	0.00	~~0.40~~ **0.37**	0.00	0.00	0.46 (chromium)	1.16
M30	**13.14**	**13.14**	**0.00**	**5.94**	**0.00**	**0.00**	**5.30 (styrene)**	**5.94**
**Natural Gas Combustion	0.03	0.03	0.00	0.02	0.18	0.41	0.00	0.00
Insignificant Activities	insig.	insig.	insig.	~~insig.~~ **0.08**	insig.	insig.	insig.	insig.
Total Emissions	~~92.70~~ **105.84**	~~92.70~~ **105.84**	0.00	~~247.90~~ **249.00**	0.18	0.41	~~208.86~~ **211.36**	~~314.53~~ **317.36**

*PM, PM10, VOC, and HAP emission factors supplied by the applicant, and differ in respect to the coating produced.
**This activity also qualifies as an insignificant activity (see Insignificant Activities).

(b) The discussion of 326 IAC 2-2 (Prevention of Significant Deterioration), on page 9 of 12 of the TSD, has been revised as follows to include the use of the AP-42 emission factor and Mixer M30:

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), this source is not considered a major source because it has the potential to emit after control equipment and limiting emissions less than 250 tons per year of any criteria pollutant and it is not one of the 28 listed source categories.

(a) The total amount of VOC input to Mixers M1 ~~through M9 and M12~~ through M18 **and M30** shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than ~~221.9~~ **248.9** tons per twelve (12) consecutive month period, rolled on a monthly basis. This VOC emission limit is required to limit source wide PTE VOC to less than 250 tons per 12 consecutive month period, based upon the following:
(1) an emission factor of 0.02 pounds VOC per pound of Cordobond produced;
(2) an emission factor of ~~0.014~~**0.015** pounds VOC per pound of polyester gelcoat produced~~, except as produced in Mixers M10 and M11 as stated in Operation Condition D.1.2~~;
(3) an emission factor of 0.001 pounds VOC per pound of liquid paste produced;
(4) any other factor determined in stack testing.

Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

(c) Additionally, pages 1, 2, 4 and 5 of 6 have been modified to include the AP-42 emission factor of 0.015 pounds VOC per pound of polyester gelcoat produced and to add mixer M30. The updated calculations are as follows:

Appendix A: Emission Calculations
Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Mixers M1-18	Storage Tanks T1-10	Natural Gas Combustion	**TOTAL**
PM	282.41	0.00	0.03	282.44
PM10	282.41	0.00	0.03	282.44
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.41	0.41
VOC	859.32	0.08	0.02	859.42
CO	0.00	0.00	0.18	0.18
total HAPs	897.90	0.00	0.00	897.90
worst case single HAP	728.91(styrene)	0.00	0.00	728.91(styrene)

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Mixers M1-18	Storage Tanks T1-10	Natural Gas Combustion	**TOTAL**
PM	92.67	0.00	0.03	92.70
PM10	92.67	0.00	0.03	92.70
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.41	0.41
VOC	248.90	0.08	0.02	249.00
CO	0.00	0.00	0.18	0.18
total HAPs	317.05	0.00	0.00	317.05
worst case single HAP	211.09 (styrene)	0.00	0.00	211.09 (styrene)

Total HAPs include those resulting from VOC emissions and metallic HAPs from PM emissions.
Total emissions based on rated capacity at 8,760 hours/year, after control.
USEPA TANKS3 program was used to compute Storage Tanks VOC emissions.

Appendix A: Emission Calculations
Volatile Organic Compounds
Fiberglass Processes
Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

	Product Mixed			Maximum	Minimum	VOC Potential Emissions		VOC Limited Emissions	
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	lbs/hr	tons/yr	lbs/hr	tons/yr
M1A	X		X	1,000.00	1.00	20.00	87.60	5.65	24.77
M1B	X		X	3,800.00	5.00	--	--	--	--
M2	X	X		3,200.00	5.00	9.60	42.05	2.71	11.89
M3	X	X		500.00	2.00	3.75	16.43	1.06	4.64
M4	X	X		500.00	2.00	3.75	16.43	1.06	4.64
M5A	X	X	X	400.00	1.00	8.00	35.04	2.26	9.91
M5B	X	X	X	2,000.00	3.25	--	--	--	--
M6	X	X		2,000.00	3.25	9.23	40.43	2.61	11.43
M7	X	X		3,200.00	5.00	9.60	42.05	2.71	11.89
M8	X			6,000.00	6.75	13.33	58.40	3.77	16.51
M9	X			7,800.00	6.75	17.33	75.92	4.90	21.46
M10	X			11,000.00	6.75	24.44	107.07	6.91	30.27
M11	X	X		5,000.00	1.00	75.00	328.50	21.20	92.88
M12		X		4,000.00	1.00	0.40	1.75	0.11	0.50
M13		X		1,000.00	1.00	0.10	0.44	0.03	0.12
M14		X		500.00	1.00	0.05	0.22	0.01	0.06
M15		X		3,000.00	1.00	0.30	1.31	0.08	0.37
M16		X		5,000.00	1.00	0.50	2.19	0.14	0.62
M17		X		5,000.00	1.00	0.50	2.19	0.14	0.62
M18		X		3,000.00	1.00	0.30	1.31	0.08	0.37
M30	X			44,000	11.00	4.80	21.02	1.36	5.94

Emission Factors lb VOC/lb product	
Gelcoat	0.0150
Liquid Paste	0.0001
Cordobond	0.0200

Annual Emissions in Tons		**lbs/hr**	**tons/yr**
VOC		**200.99**	**880.34**

Usage Limitation		**tons/yr**	**tons/yr**
VOC	**71.73%**	56.83	248.90

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
The worst case for VOCs on blenders 1 and 5 is for Cordobond Production, listed as case A. The worst case for HAPs for blenders 1 and 5 is for Gelcoat, listed as Case B. Therefore, the Cordobond production rates and emission factors have been used.
Potential VOC Pounds per Hour = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential VOC Tons Per Year = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton

Appendix A: Emission Calculations
Hazardous Air Pollutants from Volatile Organic Compounds
Fiberglass Processes
Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

	Product Mixed								Limited Emissions		
Unit ID	Gelcoat	Liquid Paste	Cordobond	Maximum Batch Size, lbs	Minimum Batch Time, hrs	Styrene 89.15% tons/yr	Methyl Methacrylate 9.96% tons/yr	Methanol 0.89% tons/yr	Styrene 89.15% tons/yr	Methyl Methacrylate 9.96% tons/yr	Methanol 0.89% tons/yr
M1A	X		X	--	--	--	--	--	--	--	--
M1B	X		X	3,800.00	5.00	44.51	4.97	0.44	12.58	1.41	0.13
M2	X	X		3,200.00	5.00	37.49	4.19	0.37	10.60	1.18	0.11
M3	X	X		500.00	2.00	14.64	1.64	0.15	4.14	0.46	0.04
M4	X	X		500.00	2.00	14.64	1.64	0.15	4.14	0.46	0.04
M5A	X	X	X	--	--	--	--	--	--	--	--
M5B	X	X	X	2,000.00	3.25	36.04	4.03	0.36	10.19	1.14	0.10
M6	X	X		2,000.00	3.25	36.04	4.03	0.36	10.19	1.14	0.10
M7	X	X		3,200.00	5.00	37.49	4.19	0.37	10.60	1.18	0.11
M8	X			6,000.00	6.75	52.06	5.82	0.52	14.72	1.64	0.15
M9	X			7,800.00	6.75	67.68	7.56	0.68	19.13	2.14	0.19
M10	X			11,000.00	6.75	95.45	10.66	0.95	26.98	3.01	0.27
M11	X	X		5,000.00	1.00	292.86	32.72	2.92	82.79	9.25	0.83
M12		X		4,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M13		X		1,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M14		X		500.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M15		X		3,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M16		X		5,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M17		X		5,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M18		X		3,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M30				44,000	11.00	18.74	2.09	0.19	5.30	0.59	0.05

Emission Factors lb VOC/lb product	
Gelcoat	0.0150
Liquid Paste	0.0001
Cordobond	0.0200

Total tons/year	**Styrene**	**Methyl Methacrylate**	**Methanol**	Total HAPs
	747.65	**83.53**	**7.47**	838.65

Usage Limitation	**Styrene**	**Methyl Methacrylate**	**Methanol**	Total HAPs
71.73%	**211.36**	**23.61**	**2.11**	237.09

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
The worst case for VOCs on blenders 1 and 5 is for Cordobond Production, listed as case A. The worst case for HAPs for blenders 1 and 5 is for Gelcoat, listed as Case B. Therefore, the Gelcoat production rates and emission factors have been used.
Potential HAP from VOC Pounds per Hour = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential HAP from VOC Tons Per Year = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton

Appendix A: Emission Calculations
Hazardous Air Pollutants from Particulate Matter
Fiberglass Processes
Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

	Product Mixed			Maximum	Minimum	Control	Antimony 9.23%	Cadmium 11.85%	Chromium 59.64%	Cobalt 34.57%	Lead 8.68%	Manganese 8.68%	Nickel 11.57%	Selenium 5.23%
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	Efficiency	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr
M1	X	X		3,800.00	5.00	0.00%	0.52	0.67	3.36	1.95	0.49	0.49	0.65	0.29
M2	X	X		3,200.00	5.00	0.00%	0.44	0.56	2.83	1.64	0.41	0.41	0.55	0.25
M3	X	X		500.00	2.00	0.00%	0.17	0.22	1.11	0.64	0.16	0.16	0.21	0.10
M4	X	X		500.00	2.00	0.00%	0.17	0.22	1.11	0.64	0.16	0.16	0.21	0.10
M5	X	X	X	2,000.00	3.25	0.00%	0.42	0.54	2.72	1.58	0.40	0.40	0.53	0.24
M6	X			2,000.00	3.25	0.00%	0.20	0.26	1.28	0.74	0.19	0.19	0.25	0.11
M7	X			3,200.00	5.00	0.00%	0.21	**0.27**	1.34	0.77	0.19	0.19	0.26	0.12
M8	X			6,000.00	6.75	0.00%	0.29	0.37	1.85	1.07	0.27	0.27	0.36	0.16
M9	X	X		7,800.00	6.75	0.00%	0.79	1.02	5.11	2.96	0.74	0.74	0.99	0.45
M10		X		11,000.00	6.75	0.00%	1.12	1.43	7.21	4.18	1.05	1.05	1.40	0.63
M11		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M12		X		4,000.00	1.00	96.50%	0.10	0.12	0.62	0.36	0.09	0.09	0.12	0.05
M13		X		1,000.00	1.00	96.50%	0.02	0.03	0.15	0.09	0.02	0.02	0.03	0.01
M14		X		500.00	1.00	96.50%	0.01	0.02	0.08	0.04	0.01	0.01	0.02	0.01
M15		X		3,000.00	1.00	96.50%	0.07	0.09	0.46	0.27	0.07	0.07	0.09	0.04
M16		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M17		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M18		X		3,000.00	1.00	96.50%	0.07	0.09	0.46	0.27	0.07	0.07	0.09	0.04

Emission Factors

lb PM/ton product	
Gelcoat	1.5972
Liquid Paste	3.3880
Cordobond	1.2100

Total tons/year		**Antimony**	**Cadmium**	**Chromium**	**Cobalt**	**Lead**	**Manganese**	**Nickel**	**Selenium**
		4.96	**6.36**	**32.03**	**18.57**	**4.66**	**4.66**	**6.21**	**2.81**

Usage Limitation		**Antimony**	**Cadmium**	**Chromium**	**Cobalt**	**Lead**	**Manganese**	**Nickel**	**Selenium**
0.00%		**4.96**	**6.36**	**32.03**	**18.57**	**4.66**	**4.66**	**6.21**	**.81**

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
The worst case for HAPs is for Gelcoat Production. Therefore, the Gelcoat production rates and emission factors have been used.
Potential HAP from PM Pounds per Hour = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential HAP from PM Tons Per Year = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton
Emission factors for PM based on 4.84 lbs pm/ton solids, and 33% solids for gelcoat, 70% solids for liquid paste, and 25% solids for cordobond. (data supplied by applicant)

Indiana Department of Environmental Management
Office of Air Management
Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	**Ferro Corporation**
Source Location:	**1301 North Flora Street, Plymouth, IN 46563**
County:	**Marshall**
SIC Code:	**3087**
Operation Permit No.:	**T099-7538-00025**
Permit Reviewer:	**Phillip Ritz / EVP**

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Ferro Corporation relating to the operation of a mixing and blending manufacturing operation for liquid coatings and dispersions.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Eighteen mixers, consisting of:
- (1) one (1) mixer, identified as M1, with a maximum unit capacity of 3,800 pounds of raw material for gelcoat and cordobond production per batch, exhausting within the building,
- (2) one (1) mixer, identified as M2, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,
- (3) one (1) mixer, identified as M3, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,
- (4) one (1) mixer, identified as M4, with a maximum unit capacity of 500 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,
- (5) one (1) mixer, identified as M5, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat, liquid paste, and cordobond production per batch, exhausting within the building,
- (6) one (1) mixer, identified as M6, with a maximum unit capacity of 2,000 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,
- (7) one (1) mixer, identified as M7, with a maximum unit capacity of 3,200 pounds of raw material for gelcoat and liquid paste production per batch, exhausting within the building,
- (8) one (1) mixer, identified as M8, with a maximum unit capacity of 6,000 pounds of raw material for gelcoat production per batch, exhausting within the building,
- (9) one (1) mixer, identified as M9, with a maximum unit capacity of 7,800 pounds of raw material for gelcoat production per batch, exhausting within the building,

(10) one (1) mixer, identified as M10, with a maximum unit capacity of 11,000 pounds of raw material for gelcoat production per batch, exhausting within the building,

(11) one (1) mixer, identified as M11, with a maximum unit capacity of 5,000 pounds of raw material for gelcoat and liquid paste production per batch, utilizing baghouse G5 for particulate control, exhausting within the building,

(12) one (1) mixer, identified as M12, with a maximum unit capacity of 4,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(13) one (1) mixer, identified as M13, with a maximum unit capacity of 1,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(14) one (1) mixer, identified as M14, with a maximum unit capacity of 500 pounds of raw material for liquid paste production per batch, utilizing baghouse G4 for particulate control, exhausting within the building,

(15) one (1) mixer, identified as M15, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building,

(16) two (2) mixers, identified as M16 and M17, each with a maximum unit capacity of 5,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building, and

(17) one (1) mixer, identified as M18, with a maximum unit capacity of 3,000 pounds of raw material for liquid paste production per batch, utilizing baghouse G3 for particulate control, exhausting within the building.

Unpermitted Emission Units and Pollution Control Equipment Requiring Prior Approval

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Requiring Prior Approval

There are no new facilities to be reviewed under Prior Approval.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour,

(b) Closed loop heating and cooling systems,

(c) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment,

(d) Paved and unpaved roads and parking lots with public access,

(e) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower,

(f) A laboratory as defined in 326 IAC 2-7-1(20)(C), consisting of:

(1) one (1) Q/C gelcoat spraybooth, exhausting to stacks D7 and D8, utilizing dry filters as particulate control,

(2) one (1) electric heated oil roll mill identified as RM1,

(3) two (2) Q/C lab drill presses,

(4) six (6) extruders, identified as IM1-IM6,

(5) one (1) BMC/SMC sample mixer, and

(6) one (1) 100 ton QC press.

(g) Activities or categories with emissions equal to or less than significant thresholds :
- (1) four (4) Roll Mill/Lab Mill for gelcoat and liquid paste,
  - (i) one (1) 3-Roll Mill/Lab Mill, identified as RM2 with a maximum unit capacity of 0.75 hp, exhausting within the building,
  - (ii) one (1) 3-Roll Mill, identified as RM3, exhausting within the building,
  - (iii) one (1) 3-Roll Mill, identified as RM4, exhausting within the building, and
  - (iv) one (1) 3-Roll Mill, identified as RM5, exhausting within the building.
- (2) Packaging area for Cordobond, consisting of bottling, can filling and labeling
- (4) Batching area,
- (5) Tub washing (Acetone) and Storage Area,
- (8) three (3) small mixers, identified as M19, M20, and M21,
- (9) four (4) mixers, identified as:
  - (i) DM1, with a maximum unit capacity of 500 lb per hour,
  - (ii) DM2, with a maximum unit capacity of 250 lb per hour,
  - (iii) DM3, with a maximum unit capacity of 250 lb per hour, and
  - (iv) DM4, with a maximum unit capacity of 100 lb per hour.
- (10) four (4) portable mixers/blenders for dry color production, utilizing baghouse G5 for particulate control,
- (11) four (4) 6,000 gallon tanks storing bulk organic liquid, identified as ST1, ST2, ST3, and ST4
- (12) two (2) 13,000 gallon tanks for storing bulk organic liquid, identified as ST5 and ST6,
- (13) two (2) 4,000 gallon tanks for storing bulk organic liquid, identified as ST7 and ST8,
- (14) two (2) 6,000 gallon tanks for storing bulk organic liquid (styrene monomer), identified as ST9 and ST10.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(1) CP 099-4443, issued on October 30, 1995;

(2) CP 099-4351, issued on Issued on February 22, 1995;

(3) Registration, issued on November 16, 1990;

(4) Exemption, issued on July 31, 1990; and

(5) OP 50-03-92-0129, issued on issued on August 15, 1988.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

(1) OP 50-03-92-0129, issued on issued on August 15, 1988.

Condition 4: That pursuant to 326 IAC 8-1-6, manufacturing of polyester gelcoats shall use best available control technology (BACT). BACT has been determined to be a process modification for the manufacture of polyester gelcoats without any add-on control device. To meet the BACT requirement, the applicant shall conduct research to develop a process that will reduce the allowable annual VOC emission rate associated with the manufacture of polyester gelcoats by 10% to 50%. The applicant shall submit an annual report within 30 days of January 1 describing the research conducted during the past twelve (12) months, results of the previous year's research, any process modification to be implemented in the coming calendar year, and a schedule for implementing the modification. Annual reporting of such process modification research shall continue until a method of reducing up to 50% of the allowable VOC emissions has been developed. If, after at least one (1) year of research by the applicant, evidence from such research indicates that a 50 % reduction in allowable VOC emissions is not achievable by a process modification, the annual reporting can be discontinued upon approval from the OAM. Any discontinuance of reporting shall require implementation of the process modification that has been determined at the time of report stoppage to provide the greatest reduction in allowable VOC emissions associated with the manufacture of polyester gelcoats. Implementation of the process modification shall occur within 6 months of OAM approval to discontinue research reporting.

Reason not incorporated: The changes to the exhaust and cover configuration of M10 and M11 satisfy the process modification research requirement of Operation Condition 4 (BACT requirement) of CP099-4443-00025, issued October 30, 1995. Therefore, the process modification research and annual progress reporting requirements are satisfied and no longer apply (see page 11 of 12 of the TSD for additional information).

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on December 11, 1996. Additional information was received on February 2, 1999.

A notice of completeness letter was mailed to the source on January 30, 1997.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 6).

Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as "emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	Potential Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	less than 100
VOC	greater than 250
CO	less than 100
NO_x	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Styrene	greater than 10
Methyl Methacrylate	greater than 10
Methanol	less than 10
Antimony	less than 10
Cadmium	less than 10
Chromium	greater than 10
Cobalt	greater than 10
Lead	less than 10
Manganese	less than 10
Nickel	less than 10
Selenium	less than 10
TOTAL	greater than 25

(a) The potential emissions (as defined in 326 IAC 1-2-55) of volatile organic compounds (VOC) and particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM-10) are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in 326 IAC 1-2-55) the combination of HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1996 Source emission data.

Pollutant	Actual Emissions (tons/year)
PM	4.11
PM-10	4.11
SO_2	0.00
VOC	39.99
CO	0.00
NO_x	0.00
HAP (Styrene)	35.38
HAP (Methyl Methacrylate)	3.95
HAP (Methanol)	0.35
HAP (Antimony)	0.38
HAP (Cadmium)	0.49
HAP (Chromium)	2.45
HAP (Cobalt)	1.42
HAP (Lead)	0.36
HAP (Manganese)	0.36
HAP (Nickel)	0.47
HAP (Selenium)	0.21

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)							
Process/facility	*PM	*PM-10	SO_2	*VOC	CO	NO_X	Any Single HAP	Total HAPs
Mixer M1	0.22	0.22	0.00	26.89	0.00	0.00	12.75(styrene)	22.73
Mixer M2	23.74	23.74	0.00	12.05	0.00	0.00	10.74(styrene)	19.14
Mixer M3	3.71	3.71	0.00	4.71	0.00	0.00	4.20(styrene)	7.48
Mixer M4	3.71	3.71	0.00	4.71	0.00	0.00	4.20(styrene)	7.48
Mixer M5	2.97	2.97	0.00	10.76	0.00	0.00	10.33(styrene)	18.41
Mixer M6	14.84	14.84	0.00	11.58	0.00	0.00	10.33(styrene)	14.8
Mixer M7	23.74	23.74	0.00	12.05	0.00	0.00	10.74(styrene)	15.39
Mixer M8	3.11	3.11	0.00	16.73	0.00	0.00	14.92(styrene)	21.38
Mixer M9	4.04	4.04	0.00	21.75	0.00	0.00	19.39(styrene)	34.57
Mixer M10	5.70	5.70	0.00	30.68	0.00	0.00	27.35(styrene)	48.75
Mixer M11	1.30	1.30	0.00	94.12	0.00	0.00	83.91 (styrene)	96.07
Mixer M12	1.04	1.04	0.00	0.54	0.00	0.00	0.62(styrene)	1.55
Mixer M13	0.26	0.26	0.00	0.13	0.00	0.00	0.15 (chromium)	0.39
Mixer M14	0.13	0.13	0.00	0.07	0.00	0.00	0.08 (chromium)	0.19
Mixer M15	0.78	0.78	0.00	0.40	0.00	0.00	0.46 (chromium)	1.16
Mixer M16	1.30	1.30	0.00	0.67	0.00	0.00	0.77 (chromium)	1.94
Mixer M17	1.30	1.30	0.00	0.67	0.00	0.00	0.77 (chromium)	1.94
Mixer M18	0.78	0.78	0.00	0.40	0.00	0.00	0.46 (chromium)	1.16
**Natural Gas Combustion	0.03	0.03	0.00	0.02	0.18	0.41	0.00	0
Insignificant Activities	insig.	insig.	insig.	insig.	insig.	insig.	insig.	insig.
Total Emissions	92.70	92.70	0.00	247.90	0.18	0.41	208.86	314.53

*PM, PM10, VOC, and HAP emission factors supplied by the applicant, and differ in respect to the coating produced.
**This activity also qualifies as an insignificant activity (see Insignificant Activities).

County Attainment Status

The source is located in Marshall County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_X) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Marshall County has been designated as attainment or unclassifiable for ozone.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) The New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) "Standards of Performance for Volatile Organic Liquid Storage Vessels" applies to the two (2) 13,000 gallon tanks, identified as ST5 and ST6, since each of the tanks were installed after July 23, 1984, and each has a storage capacity greater than 40 cubic meters. However, the tanks have a vapor pressure of less than 15.0 kPa and a design capacity less than 75 m^3, therefore, the tanks are subject to only 40 CFR Part 60.116b, paragraph (a) through (c) which requires record keeping.

(b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart W as it mixes and does not manufacture basic liquid epoxy resin or wet strength resins.

(c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart U as it does not process Group I Polymers and Resins.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), this source is not considered a major source because it has the potential to emit after control equipment and limiting emissions less than 250 tons per year of any criteria pollutant and it is not one of the 28 listed source categories.

(a) The total amount of VOC input to Mixers M1 through M9 and M12 through M18 shall be limited such that the potential to emit (PTE) VOC from the manufacture of liquid coatings and dispersions, including polyester gelcoats, pastes, and Cordobond, shall be limited to less than 221.9 tons per twelve (12) consecutive month period, rolled on a monthly basis. This VOC emission limit is required to limit source wide PTE VOC to less than 250 tons per 12 consecutive month period, based upon the following:

(1) an emission factor of 0.02 pounds VOC per pound of Cordobond produced;

(2) an emission factor of 0.014 pounds VOC per pound of polyester gelcoat produced, except as produced in Mixers M10 and M11 as stated in Operation Condition D.1.2;

(3) an emission factor of 0.001 pounds VOC per pound of liquid paste produced;

(4) any other factor determined in stack testing.

Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than or one hundred (100) tons per year of VOC and PM-10. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period, as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The source shall comply with the fugitive dust limitations outlined in 326 IAC 6-4 (Fugitive Dust Emissions). No fugitive dust emissions shall be visible crossing the boundary or property line of the source.

State Rule Applicability - Individual Facilities

326 IAC 2-1-3.4 (New Source Toxics Control)

Pursuant to 326 IAC 2-1-3.4 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, must be controlled using Maximum Available Control Technology (MACT). All current operations at this plant were constructed before the rule applicability date of July 27, 1997. Therefore, these facilities are not subject to the requirements of 326 IAC 2-1-3.4.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the blending operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of allowable emissions in pounds per hour; and P = process weight rate in tons per hour

The allowable emissions for each facility are as follows:

Emission Unit	Process Weight Rate (tons/hr)	*Uncontrolled PM Emissions (lb/hr)	Control Efficiency %	*Controlled PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Mixer M1	1.90	0.20	0.00%	0.20	6.30
Mixer M2	1.60	5.42	0.00%	5.42	5.62
Mixer M3	0.25	0.85	0.00%	0.85	1.62
Mixer M4	0.25	0.85	0.00%	0.85	1.62
Mixer M5	1.00	0.68	0.00%	0.68	4.10
Mixer M6	1.00	3.39	0.00%	3.39	4.10
Mixer M7	1.60	5.42	0.00%	5.42	5.62
Mixer M8	3.00	0.71	0.00%	0.71	8.56
Mixer M9	3.90	0.92	0.00%	0.92	10.20
Mixer M10	5.50	1.30	0.00%	1.30	12.85
Mixer M11	2.50	8.47	97.00%	0.25	7.58
Mixer M12	2.00	6.78	97.00%	0.20	6.52
Mixer M13	0.50	1.69	97.00%	0.05	2.58
Mixer M14	0.25	0.85	97.00%	0.03	1.62
Mixer M15	1.50	5.08	97.00%	0.15	5.38
Mixer M16	2.50	8.47	97.00%	0.25	7.58
Mixer M17	2.50	8.47	97.00%	0.25	7.58
Mixer M18	1.50	5.08	97.00%	0.15	5.38

*PM and PM10 emission factors supplied by the applicant, and differ in respect to the coating produced.

When operating with baghouses as particulate control Mixers M11, M12, M16, and M17 are in compliance with 326 IAC 6-3-2 (Process Operations), and PM emissions from the rest of the blending operation are in compliance with 326 IAC 6-3-2.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

Facilities constructed after January 1, 1980, with potential VOC emissions greater than 25 tons per year are subject to 326 IAC 8-1-6. Pursuant to CP099-4443-00025, issued October 30, 1995, the Best Available Control Technology (BACT) requirement of 326 IAC 8-1-6 was determined to apply to the manufacture of gelcoats in Mixers M10 and M11. BACT under Operation Condition 4 was determined to be a process modification without any add-on control, whereby the source was to conduct research to develop a process to reduce allowable annual VOC emission by 10-50%. The source was required to submit an annual report on the status of its research.

Included in the Part 70 Permit application was a research paper describing two process modification procedures evaluated pursuant to Operation Condition 4 of CP099-4443-00025. Briefly, the evaluated modifications are described as follows:

(a) use of the coolant jacket to cool the resin, and
(b) changes to the exhaust and cover configuration.

The cooling jacket is technologically infeasible since the mixture nearest the vat wall would thicken, stiffen, and resist mixing properly, and varying batch sizes would result in a high probability that humidity condensate would form on a portion of the vat wall above the resin surface. Moving of the vent is expected to reduce allowable VOC (computed in CP099-4443-00025 as 42.9 tons per year) by 40 percent.

Therefore, BACT has been determined as follows:

(a) Mixers M10 and M11 shall be configured and operated as follows:
  (1) The exhaust vent shall be positioned in near proximity to the lip of each mixer, but not located on or over the mixer lid, such that VOC vaporization during product mixing is minimized; and
  (2) The mixer lids shall be in place when mixing, except during raw material transfer to each mixer, sampling, and final product removal from each mixer.

(b) CP099-4443-00025 computed the VOC emissions from Mixers M10 and M11 as 42.9 tons per year. The process modification is expected to reduce allowable VOC emissions by 40 percent, or 25.9 tons per year. The total amount of VOC product manufactured in Mixers M10 and M11 shall be limited to 308.3 tons per year, per twelve (12) consecutive months, rolled on a monthly basis. This production limitation is necessary to limit the potential to emit (PTE) VOC from the manufacture of polyester gel coats to 25.9 tons per year, per twelve (12) consecutive months, based upon an emission factor of 0.084 pounds VOC emitted per pound of product manufactured or any other factor determined in stack testing.

(c) Compliance with the requirements of this condition satisfy the process modification research requirement of Operation Condition 4 (BACT requirement) of CP099-4443-00025, issued October 30, 1995. Therefore, the process modification research and annual progress reporting requirements are satisfied and no longer apply.

No other 326 IAC Article 8 rules apply.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period. The compliance monitoring requirements applicable to this source are as follows:

(a) There are no compliance monitoring requirements applicable to this source.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

(a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations. (pages 4 and 5 of 6)

Conclusion

The operation of this manufacturing operation for liquid coatings and dispersions shall be subject to the conditions of the attached proposed **Part 70 Permit No. T099-7538-00025.**

Appendix A: Emission Calculations

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Mixers M1-18	Storage Tanks T1-10	Natural Gas Combustion	**TOTAL**
PM	282.41	0.00	0.03	282.44
PM10	282.41	0.00	0.03	282.44
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.41	0.41
VOC	859.32	0.08	0.02	859.42
CO	0.00	0.00	0.18	0.18
total HAPs	897.90	0.00	0.00	897.90
worst case single HAP	728.91(styrene)	0.00	0.00	728.91(styrene)

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Mixers M1-18	Storage Tanks T1-10	Natural Gas Combustion	**TOTAL**
PM	92.67	0.00	0.03	92.70
PM10	92.67	0.00	0.03	92.70
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.41	0.41
VOC	248.90	0.08	0.02	249.00
CO	0.00	0.00	0.18	0.18
total HAPs	317.05	0.00	0.00	317.05
worst case single HAP	211.09 (styrene)	0.00	0.00	211.09 (styrene)

Total HAPs include those resulting from VOC emissions and metallic HAPs from PM emissions.
Total emissions based on rated capacity at 8,760 hours/year, after control.
USEPA TANKS3 program was used to compute Storage Tanks VOC emissions.

Appendix A: Emission Calculations
Volatile Organic Compounds
Fiberglass Processes

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

						VOC			
	Product Mixed			Maximum	Minimum	Potential Emissions		Limited Emissions	
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	lbs/hr	tons/yr	lbs/hr	tons/yr
M1A	X		X	1,000.00	1.00	20.00	87.60	5.65	24.77
M1B	X		X	3,800.00	5.00	--	--	--	--
M2	X	X		3,200.00	5.00	9.60	42.05	2.71	11.89
M3	X	X		500.00	2.00	3.75	16.43	1.06	4.64
M4	X	X		500.00	2.00	3.75	16.43	1.06	4.64
M5A	X	X	X	400.00	1.00	8.00	35.04	2.26	9.91
M5B	X	X	X	2,000.00	3.25	--	--	--	--
M6	X	X		2,000.00	3.25	9.23	40.43	2.61	11.43
M7	X	X		3,200.00	5.00	9.60	42.05	2.71	11.89
M8	X			6,000.00	6.75	13.33	58.40	3.77	16.51
M9	X			7,800.00	6.75	17.33	75.92	4.90	21.46
M10	X			11,000.00	6.75	24.44	107.07	6.91	30.27
M11	X	X		5,000.00	1.00	75.00	328.50	21.20	92.88
M12		X		4,000.00	1.00	0.40	1.75	0.11	0.50
M13		X		1,000.00	1.00	0.10	0.44	0.03	0.12
M14		X		500.00	1.00	0.05	0.22	0.01	0.06
M15		X		3,000.00	1.00	0.30	1.31	0.08	0.37
M16		X		5,000.00	1.00	0.50	2.19	0.14	0.62
M17		X		5,000.00	1.00	0.50	2.19	0.14	0.62
M18		X		3,000.00	1.00	0.30	1.31	0.08	0.37
M30	X			44,000	11.00	4.80	21.02	1.36	5.94

Emission Factors	
lb VOC/lb product	
Gelcoat	0.0150
Liquid Paste	0.0001
Cordobond	0.0200

Annual Emissions in Tons		**lbs/hr**	**tons/yr**
VOC		**200.99**	**880.34**

Usage Limitation		**tons/yr**	**tons/yr**
VOC	**71.73%**	**56.83**	**248.90**

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
The worst case for VOCs on blenders 1 and 5 is for Cordobond Production,listed as case A. The worst case for HAPs for blenders 1 and 5 is for Gelcoat, listed as Case B. Therefore, the Cordobond production rates and emission factors have been used.
Potential VOC Pounds per Hour = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential VOC Tons Per Year = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton

Appendix A: Emission Calculations
Particulate Matter
Fiberglass Processes

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

							PM			
	Product Mixed			Maximum	Minimum	Control	Potential Emissions		Controlled Emissions	
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	Efficiency	lbs/hr	tons/yr	lbs/hr	tons/yr
M1	X		X	1,000.00	4.00	0.00%	0.20	0.22	0.20	0.22
M2	X	X		3,200.00	1.00	0.00%	5.42	23.74	5.42	23.74
M3	X	X		500.00	1.00	0.00%	0.85	3.71	0.85	3.71
M4	X	X		500.00	1.00	0.00%	0.85	3.71	0.85	3.71
M5	X	X	X	400.00	1.00	0.00%	0.68	2.97	0.68	2.97
M6	X	X		2,000.00	1.00	0.00%	3.39	14.84	3.39	14.84
M7	X	X		3,200.00	1.00	0.00%	5.42	23.74	5.42	23.74
M8	X			6,000.00	6.75	0.00%	0.71	3.11	0.71	3.11
M9	X			7,800.00	6.75	0.00%	0.92	4.04	0.92	4.04
M10	X			11,000.00	6.75	0.00%	1.30	5.70	1.30	5.70
M11	X	X		5,000.00	1.00	96.50%	8.47	37.10	0.30	1.30
M12		X		4,000.00	1.00	96.50%	6.78	29.68	0.24	1.04
M13		X		1,000.00	1.00	96.50%	1.69	7.42	0.06	0.26
M14		X		500.00	1.00	96.50%	0.85	3.71	0.03	0.13
M15		X		3,000.00	1.00	96.50%	5.08	22.26	0.18	0.78
M16		X		5,000.00	1.00	96.50%	8.47	37.10	0.30	1.30
M17		X		5,000.00	1.00	96.50%	8.47	37.10	0.30	1.30
M18		X		3,000.00	1.00	96.50%	5.08	22.26	0.18	0.78
M30				44,000	11.00	0.00%	3.00	13.14	3.00	13.14

Emission Factors	
lb PM/ton product	
Gelcoat	1.5972
Liquid Paste	3.3880
Cordobond	1.2100

Annual Emissions in Tons			**lbs/hr**	**tons/yr**	**lbs/hr**	**tons/yr**
PM			**67.63**	**295.55**	**24.31**	**105.81**

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
Different products result in worst case PM emissions, therefore the VOC usage limitation does not apply to these PM emissions.
Potential PM Pounds per Hour = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential PM Tons Per Year = Worst Case Emission Factor x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton

Appendix A: Emission Calculations
Hazardous Air Pollutants from Volatile Organic Compounds
Fiberglass Processes

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

	Product Mixed			Maximum	Minimum	Styrene 89.15%	Methyl Methacrylate 9.96%	Methanol 0.89%	Limited Emissions Styrene 89.15%	Methyl Methacrylate 9.96%	Methanol 0.89%
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr
M1A	X		X	--	--	--	--	--	--	--	--
M1B	X		X	3,800.00	5.00	44.51	4.97	0.44	12.58	1.41	0.13
M2	X	X		3,200.00	5.00	37.49	4.19	0.37	10.60	1.18	0.11
M3	X	X		500.00	2.00	14.64	1.64	0.15	4.14	0.46	0.04
M4	X	X		500.00	2.00	14.64	1.64	0.15	4.14	0.46	0.04
M5A	X	X	X	--	--	--	--	--	--	--	--
M5B	X	X	X	2,000.00	3.25	36.04	4.03	0.36	10.19	1.14	0.10
M6	X	X		2,000.00	3.25	36.04	4.03	0.36	10.19	1.14	0.10
M7	X	X		3,200.00	5.00	37.49	4.19	0.37	10.60	1.18	0.11
M8	X			6,000.00	6.75	52.06	5.82	0.52	14.72	1.64	0.15
M9	X			7,800.00	6.75	67.68	7.56	0.68	19.13	2.14	0.19
M10	X			11,000.00	6.75	95.45	10.66	0.95	26.98	3.01	0.27
M11	X	X		5,000.00	1.00	292.86	32.72	2.92	82.79	9.25	0.83
M12		X		4,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M13		X		1,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M14		X		500.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M15		X		3,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M16		X		5,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M17		X		5,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M18		X		3,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
M30				44,000	11.00	18.74	2.09	0.19	5.30	0.59	0.05

Emission Factors lb VOC/lb product	
Gelcoat	0.0150
Liquid Paste	0.0001
Cordobond	0.0200

Total tons/year	**Styrene**	**Methyl Methacrylate**	**Methanol**	Total HAPs
	747.65	**83.53**	**7.47**	838.65

Usage Limitation	**Styrene**	**Methyl Methacrylate**	**Methanol**	Total HAPs
71.73%	**211.36**	**23.61**	**2.11**	237.09

Methodology:

Shaded Cells denote the worst case product scenario for the particular piece of equipment.

The worst case for VOCs on blenders 1 and 5 is for Cordobond Production,listed as case A. The worst case for HAPs for blenders 1 and 5 is for Gelcoat, listed as Case B. Therefore, the Gelcoat production rates and emission factors have been used.

Potential HAP from VOC Pounds per Hour = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)

Potential HAP from VOC Tons Per Year = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton

Appendix A: Emission Calculations
Hazardous Air Pollutants from Particulate Matter
Fiberglass Processes

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

	Product Mixed			Maximum	Minimum	Control	Antimony 9.23%	Cadmium 11.85%	Chromium 59.64%	Cobalt 34.57%	Lead 8.68%	Manganese 8.68%	Nickel 11.57%	Selenium 5.23%
Unit ID	Gelcoat	Liquid Paste	Cordobond	Batch Size, lbs	Batch Time, hrs	Efficiency	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr
M1	X	X		3,800.00	5.00	0.00%	0.52	0.67	3.36	1.95	0.49	0.49	0.65	0.29
M2	X	X		3,200.00	5.00	0.00%	0.44	0.56	2.83	1.64	0.41	0.41	0.55	0.25
M3	X	X		500.00	2.00	0.00%	0.17	0.22	1.11	0.64	0.16	0.16	0.21	0.10
M4	X	X		500.00	2.00	0.00%	0.17	0.22	1.11	0.64	0.16	0.16	0.21	0.10
M5	X	X	X	2,000.00	3.25	0.00%	0.42	0.54	2.72	1.58	0.40	0.40	0.53	0.24
M6	X			2,000.00	3.25	0.00%	0.20	0.26	1.28	0.74	0.19	0.19	0.25	0.11
M7	X			3,200.00	5.00	0.00%	0.21	**0.27**	1.34	0.77	0.19	0.19	0.26	0.12
M8	X			6,000.00	6.75	0.00%	0.29	0.37	1.85	1.07	0.27	0.27	0.36	0.16
M9	X	X		7,800.00	6.75	0.00%	0.79	1.02	5.11	2.96	0.74	0.74	0.99	0.45
M10		X		11,000.00	6.75	0.00%	1.12	1.43	7.21	4.18	1.05	1.05	1.40	0.63
M11		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M12		X		4,000.00	1.00	96.50%	0.10	0.12	0.62	0.36	0.09	0.09	0.12	0.05
M13		X		1,000.00	1.00	96.50%	0.02	0.03	0.15	0.09	0.02	0.02	0.03	0.01
M14		X		500.00	1.00	96.50%	0.01	0.02	0.08	0.04	0.01	0.01	0.02	0.01
M15		X		3,000.00	1.00	96.50%	0.07	0.09	0.46	0.27	0.07	0.07	0.09	0.04
M16		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M17		X		5,000.00	1.00	96.50%	0.12	0.15	0.77	0.45	0.11	0.11	0.15	0.07
M18		X		3,000.00	1.00	96.50%	0.07	0.09	0.46	0.27	0.07	0.07	0.09	0.04

Emission Factors	
lb PM/ton product	
Gelcoat	1.5972
Liquid Paste	3.3880
Cordobond	1.2100

Total tons/year		**Antimony**	**Cadmium**	**Chromium**	**Cobalt**	**Lead**	**Manganese**	**Nickel**	**Selenium**	
		4.96	**6.36**	**32.03**	**18.57**	**4.66**	**4.66**	**6.21**	**2.81**	80.27

Usage Limitation		**Antimony**	**Cadmium**	**Chromium**	**Cobalt**	**Lead**	**Manganese**	**Nickel**	**Selenium**
0.00%		**4.96**	**6.36**	**32.03**	**18.57**	**4.66**	**4.66**	**6.21**	**2.81**

Methodology:
Shaded Cells denote the worst case product scenario for the particular piece of equipment.
The worst case for HAPs is for Gelcoat Production. Therefore, the Gelcoat production rates and emission factors have been used.
Potential HAP from PM Pounds per Hour = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs)
Potential HAP from PM Tons Per Year = Worst Case Emission Factor x Percent of HAP x Maximum Batch Size (lbs) / Minimum Batch Time (hrs) x 8760 hours/year / 2000 lbs/ton
Emission factors for PM based on 4.84 lbs pm/ton solids, and 33% solids for gelcoat, 70% solids for liquid paste, and 25% solids for cordobond. (data supplied by applicant)

Appendix A: Emission Calculations
Natural Gas Combustion
MM Btu/hr < 0.3

Company Name: FERRO Corporation
Address City IN Zip: 1301 North Flora Street
CP: T099-7538-00025
Reviewer: Phillip Ritz/EVP
Date: 12/11/96

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.0	8.8

Heat Input Capacity includes:
Heating system.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.60	7.60	0.6	94.0	5.5	40.0
Potential Emission in tons/yr	0.03	0.03	0.00	0.41	0.02	0.18

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 emissions.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, Residential Furnaces (no SCC)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton